UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/123,253	07/27/98	HUTCHENS T	D-5639-C4

IM62/0428

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EXAMINER	
ALEXANDER,L	
ART UNIT	**PAPER NUMBER**
1743	

DATE MAILED: 04/28/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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09/123,253	07/27/98	HUTCHENS T	D-5639-C4

IM41/0210

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ART UNIT	**PAPER NUMBER**
1743	7

DATE MAILED: 02/10/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/123,253	Applicant(s) Hutchens et al.
	Examiner Lyle A. Alexander	Group Art Unit 1734

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *32-101* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *32-101* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 32-63 and 86-101 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 5,719,060. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are directed to a probe and its associated method of use where a sample is bound to the probe and disturbed in a mass spectrometer.

3. Claims 32-101 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of copending Application No. 08/068,896. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are directed to a probe and its associated method of use where a sample is bound to the probe and disturbed in a mass spectrometer .

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

Claims 32,49,64 and 86 are rejected under 35 U.S.C. § 102(a) as being clearly anticipated by Applicants' admitted prior art(see pages 1-5 of the specification).

On pages 1-2 under section 2, "Description of the Prior Art", Applicants state "Generally, analysis by mass spectrometry involves the vaporization and ionization of a small sample of mater, using a high energy source, such as a laser... The material is vaporized from the surface of a probe tip by the laser beam ... The positively charged ionized molecules are then

accelerated through a short high voltage field and let fly into a high vacuum chamber, at the far end of which strike a sensitive detector surface... which in turn, can be used to identify ... known molecules ... All prior art procedure which present proteins or other large biomolecules on a probe tip ... The laser beam strikes the mixture on the probe tip and its energy is used to vaporize a small portion of the matrix material along with some of the embedded analyte molecules...".

Within this citation from the specification a method/apparatus is defined having a spectrometer tube, vacuum means, electrical potential means for accelerating a portion of the disturbed sample, a probe for presenting the sample where a portion (not all) of the sample is used, a laser and detector. Clearly the matrix in which the sample associated is an energy absorbing means since a portion of the matrix is vaporized (i.e. the matrix has absorbed energy to change its physical state).

Claims 32-101 are rejected under 35 U.S.C. § 102(e) as being clearly anticipated by Humpel et al.

Humpel et al. teaches a method an apparatus indistinguishable from the instant claims where an analyte is immobilized and subjected to spectroscopic an analysis. In column

2 various substrates upon which the sample can be immobilized on are taught that read on the instant probe.

Claims 32,49,64 and 86 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Stuke or Zane et al.

Stuke and Zane et al. both teach a time of flight mass spectrometer for the analysis of biological samples that are bound to a sample probe when inserted into the mass spectrometer.

5. Claims 32-101 rejected under 35 U.S.C. 102(a) as being clearly anticipated by Turteltaub et al.

Turteltaub et al. teach teaches a method/apparatus time of flight mass spectrometer for the analysis of biological samples that are bound to a sample probe when inserted into the mass spectrometer similar to that presently claimed.

Claim Rejections - 35 USC § 103

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention

were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 86 S.Ct. 684, 15 L.Ed. 2nd 545 (1966), 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103 are summarized as follows:

1. Determining the scope and contents of the prior art;
2. Ascertaining the differences between the prior art and the claims at issue; and
3. Resolving the level of ordinary skill in the pertinent art.

Claims 33-48,50-63,65-85 and 87-101 are rejected under 35 U.S.C. § 103 as being unpatentable over Applicants' disclosure (see pages 1-5) or Stuke further in view of Turteltaub et al.

See Applicants' disclosure (see pages 1-5) and Stuke supra.

The cited prior art is silent to the specific types of binding and materials.

Turteltaub et al. teaches a MSTOF analysis method and apparatus similar to that presently claimed here. Turteltaub et al. teaches that small amounts of specific biological samples can be obtained by an affinity type of reaction. This type of sample acquisition is advantageous because very specific substance for

analysis can be obtained through this affinity binding collection techniques.

It would have been within the skill of the art to modify the method/apparatus taught by Applicants' disclosure (see pages 1-5) or Stuke in view of Turteltaub et al. and use affinity binding techniques to collect the samples to gain the advantages taught above.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lyle A. Alexander whose telephone number is (703) 308-3893.

LAA

February 9, 1999

LYLE A. ALEXANDER
PRIMARY EXAMINER